

### Abstract of the Disclosure

A MOSFET simulation apparatus includes an output unit, and a processor which simulates an operation of MOSFET using a new MOSFET model, and

5 outputs the simulation result to the output unit. The new MOSFET model includes a MOSFET model, a first circuit model and a second circuit model. The MOSFET model is known as BSIM3V3 and has a gate, a source, a drain and a gate insulating film. The first circuit

10 model is connected between the gate and the source, and includes first and second diode models connected in parallel in opposite directions to each other. The second circuit model connected between the gate and the drain, and including third and fourth diode models

15 connected in parallel in opposite directions to each other.